



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/976,727	10/12/2001	Daniel R. Mathias	10017566-1	2463

7590 07/22/2004

HEWLETT-PACKARD COMPANY
Intellectual Property Administration
P.O. Box 272400
Fort Collins, CO 80527-2400

EXAMINER

MCCARTHY, CHRISTOPHER S

ART UNIT	PAPER NUMBER
----------	--------------

2113

DATE MAILED: 07/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/976,727

Applicant(s)

MATHIAS ET AL.

Examiner

Christopher S. McCarthy

Art Unit

2113

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 October 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 6-17 and 20 is/are rejected.
- 7) ☒ Claim(s) 4, 5, 18 and 19 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 October 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: Page 2, paragraph 0004, mistakenly reads "and that is runs in a kernel space". Appropriate correction is required.
2. Claim 1 is objected to because of the following informalities: The preamble reads "and that is runs in a kernel space". Appropriate correction is required.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 9-14 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The preamble needs to recite a computer readable medium containing computer readable instructions and the execution thereof.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an

Art Unit: 2113

international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-3, 6-11, 14-17, 20 are rejected under 35 U.S.C. 102(e) as being anticipated by Johnson et al U.S. Patent Publication US2003/0046606.

As per claim 1, Johnson teaches a method for testing a service that provides interface functions having no user space interaction and that is runs in a kernel space of an operating system (paragraph 0007), said method comprising: loading into the kernel space a dynamically loadable kernel module (DLKM) containing a pseudo device driver having interface commands corresponding to the interface functions of the service to be tested (paragraph 0022, 0017); invoking the interface commands to exercise the interface functions to be tested; and unloading the DLKM module (claim 5).

As per claim 2, Johnson teaches method in accordance with claim 1 wherein invoking the interface commands further comprises loading a user library having user interfaces configured to test the kernel interfaces via the DLKM interface commands (paragraph 0021).

As per claim 3, Johnson teaches a method in accordance with claim 2 wherein invoking the interface commands further comprises invoking the user interfaces of the user library via a program running in user space (paragraph 0021, 0022).

As per claim 6, Johnson teaches a method in accordance with claim 1 wherein unloading the DLKM module comprises removing the interface commands corresponding to the interface functions of the service to be tested, so that the interface commands are no longer available (claim 5).

As per claim 7, Johnson teaches a method in accordance with claim 1 wherein the interface commands of the DLKM module are accessible only to a privileged user or users, and not to another user or users (paragraph 0020).

As per claim 8, Johnson teaches a method in accordance with claim 1 wherein invoking the interface commands to exercise the interface functions to be tested comprises opening the pseudo device driver, and invoking the interfaces of the device driver (paragraph 0020).

As per claim 9, Johnson teaches a medium having recorded thereon machine readable instructions configured to facilitate testing of a computing apparatus having a service with interface functions that have no user space interaction and that runs in a kernel space of an operating system (paragraph 0007), said instructions configured to instruct the computing apparatus to: load into said kernel space a dynamically loadable kernel module (DLKM) containing a pseudo device driver having interface commands corresponding to the interface functions of the service to be tested (paragraph 0009, 0017); invoke said interface commands to exercise the interface functions to be tested (paragraph 0022, 0017); and unload said DLKM module (claim 5).

As per claim 10, Johnson teaches a medium in accordance with claim 9 wherein to invoke the interface commands, said medium further has recorded thereon a user library having user interfaces configured to test the kernel interfaces via said DLKM interface commands (paragraph 0021).

As per claim 11, Johnson teaches a medium in accordance with claim 10 wherein to invoke said interface commands, said medium further has recorded thereon instructions

Art Unit: 2113

configured to invoke said user interfaces of the user library via a program running in user space (paragraph 0021, 0022).

As per claim 14, Johnson teaches a medium in accordance with claim 9 wherein the interface commands of the DLKM module are configured to be accessible only to a privileged user or users, and not to another user or users (paragraph 0020).

As per claim 15, Johnson teaches a computing apparatus comprising a processor and a storage device having recorded thereon a kernel of an operating system that includes a service in kernel space that has interface functions without user space interaction (paragraph 0007), said computing apparatus configured to: load, into the kernel space, a dynamically loadable kernel module (DLKM) containing a pseudo device driver having interface commands corresponding to the interface functions of the service to be tested (paragraph 0009, 0017); invoke said interface commands to exercise the interface functions to be tested; and unload said DLKM module (claim 5).

As per claim 16, Johnson teaches a computing apparatus in accordance with claim 15 wherein to invoke the interface commands, said computing apparatus is further configured to load a user library having user interfaces that are configured to test the kernel interfaces via said DLKM interface commands (paragraph 0021).

As per claim 17, Johnson teaches a computing apparatus in accordance with claim 16 wherein to invoke said interface commands, said computing apparatus is further configured to invoke said user interfaces of said user library via a program running in user space (paragraph 0021, 0022).

Art Unit: 2113

As per claim 20, Johnson teaches a computing apparatus in accordance with claim 15 wherein to unload said DLKM module, said computing apparatus is configured to remove said interface commands corresponding to the interface functions of the service to be tested, so that said interface commands are no longer available (claim 5).

Allowable Subject Matter

6. Claims 4, 5, 18, 19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: See attached PTO-892.

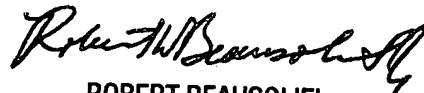
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher S. McCarthy whose telephone number is (703)305-7599. The examiner can normally be reached on M-F, 8 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Beausoliel can be reached on (703)305-9713. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2113

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

csm
July 13, 2004


ROBERT BEAUSOLIEL
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100